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Trade and Transition: Russia's Agricultural Pitfalls and Prospects for the 21st Century

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TRADE AND TRANSITION:
RUSSIA'S AGRICULTURAL PITFALLS AND PROSPECTS FOR THE 21ST CENTURY

by

Michele Girard

A Thesis Submitted in Partial Fulfillment
of the Requirements for a Degree with Honors
(Political Science)

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May 2015

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Abstract:

This thesis provides a discussion of Russian agriculture in the twenty-first century. In 2014, Russia enforced a food ban disallowing trade with western countries. The impacts of the food ban for Russia and the western world are discussed, as well as a brief explanation of some of the domestic difficulties of Russian agriculture. Internationally, Russia must find new trading partners if it is to replace the missing foods as a result of the ban.

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I. Introduction

Due to the sanctions imposed on Russia in 2014, both Russia's agricultural revenues and gross trade are being negatively impacted. Presently, Russia cannot sustain itself domestically both in terms of total agricultural production, and in terms of providing the variety of foods previously available due to the food ban. The principle reasons are as follows: the lack of loans available to farmers, the limited availability of land, the lack of a young workforce, and minimal foreign investment. For these reasons and others, if Russia is to meet its needs agriculturally in the near future it must acquire new trading partners. Sustainability is not referred to as a literal measure of survival. Domestically Russia can keep its population from starving with agricultural production as it currently stands. Sustainability is referred to in terms of agricultural diversity. In other words, the agricultural market will not be able to satisfy Russian consumers, who have developed an increasingly sophisticated appetite.

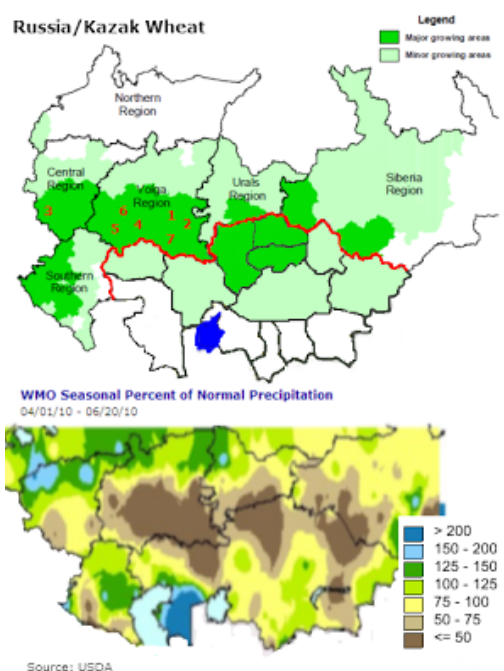
In order to be considered both viable and profitable partners for Russia, these countries with whom Russia trades must be effective at both producing and exporting in sufficient quantities some key agricultural products. For Russia these products mostly consist of fruits, vegetables, and meats. If Russia establishes these relationships it will be able to in the near future satisfy the domestic agricultural needs of the Federation. To do so, Russia is advised to expand agricultural trade with Central and South America, China, India, and Turkey.

II. Russia's Food Needs (Exports and Imports)

The agricultural sector often pales in comparison to Russia's trade of energy and natural resources, cited as playing second fiddle to other, grander incomes for the largest country in the

world. The proportion of employment in agriculture is 9.7%,¹ comprising a large population of Russians involved both in rural and urban areas. The producers in the sector are a combination of large commercial operations (agri-business) and smallholders who prominently produce for themselves as well as participating in micro and informal local markets.

Because of Russia's immense geographical advantage (i.e. a large portion of the country is sparsely populated, resulting in more hectares available for crops) the nation possesses the ability to grow several crops on a macro scale for export as well as domestic consumption. These main crops are wheat, barley, oats, sunflower seeds, potatoes, and rye. Below is a map showing the two wheat crops, winter wheat (major crop grown in south-central Russia and Ukraine) as well as the spring wheat (minor crop grown in northern Russia):

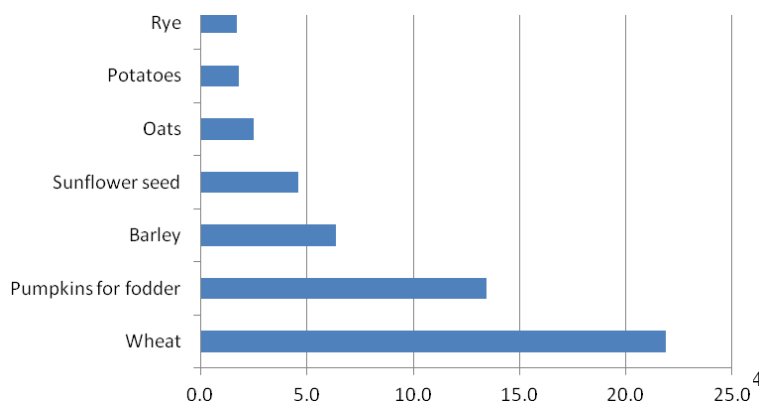


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¹ "FAO Agriculture and Trade Background Note: Russia" *FAO*, March 15, 2015, http://www.fao.org/fileadmin/templates/est/meetings/wto_comm/Trade_Policy_Brief_Russia_final.pdf

² Fig.1. Nogger. Source: USDA. 2010, Digital Image. Available from: Noggers Blog, <http://nogger-noggersblog.blogspot.com/2010/07/russiakazakh-latest.html> (accessed March 2, 2015)

The chief amongst this group is wheat, which takes up the largest portion of arable land, an immense 26.6 million hectares in 2009, accounting for 21.9% of all arable land in the Russian Federation.³ The graph below indicates the share of area harvested in total arable land in percentages for 2009:

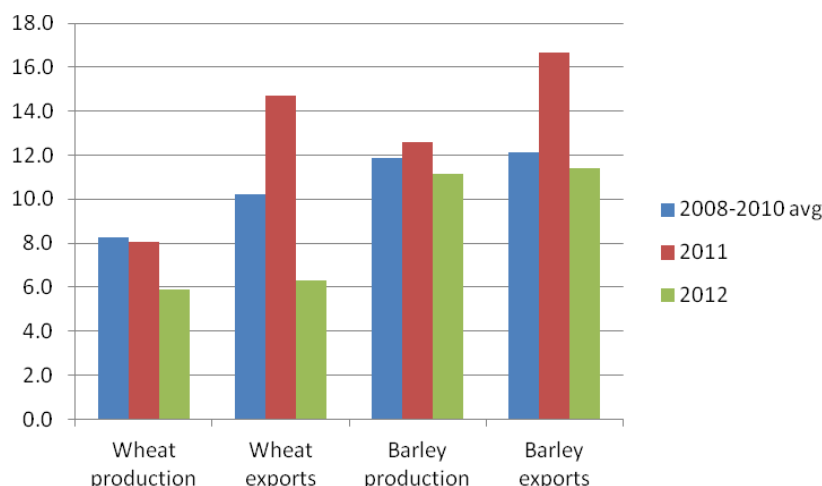


Source: FAOSTAT

As exhibited above, wheat is Russia's foremost crop, utilizing nearly four times the land as the next closest grain crop, barley. Wheat has become the country's soil grown gold. Russia continues to produce globally significant amounts of grains. In 2012 the country produced 12% of the world's barley, and 5.9% of wheat. The graph below represents the country's share in the world production of wheat and barley (by volume):

³ "FAO Agriculture and Trade Background Note: Russia" *FAO*, March 15, 2015, http://www.fao.org/fileadmin/templates/est/meetings/wto_comm/Trade_Policy_Brief_Russia_final.pdf

⁴ Fig.2. Source: FAOSTAT. 2009, Digital Image. Available from: FAO Agriculture and Trade Background Note: Russia, http://www.fao.org/fileadmin/templates/est/meetings/wto_comm/Trade_Policy_Brief_Russia_final.pdf (accessed March 3, 2015)



Source: FAO Food Outlook November 2012

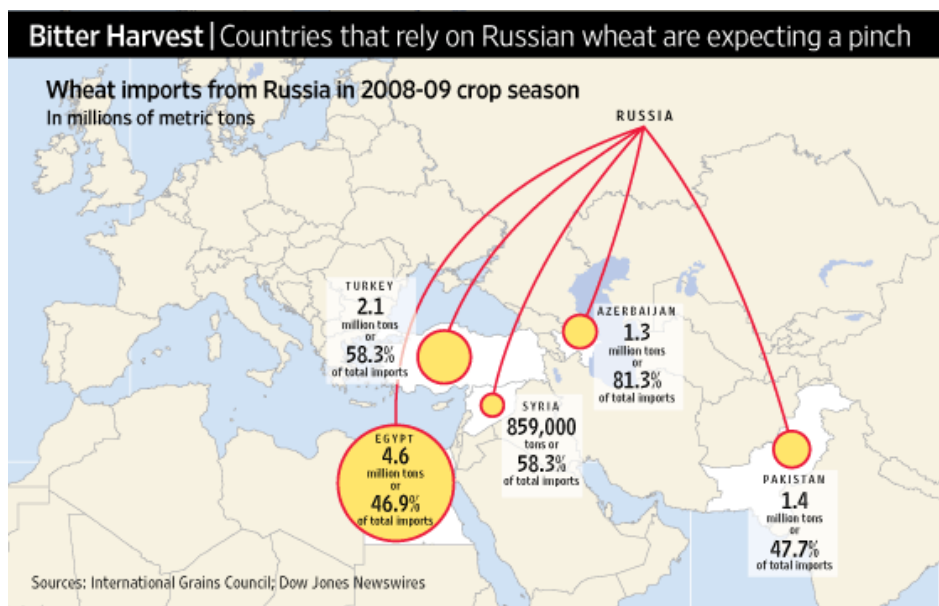
Grain exports, like other crops, are subject to changing weather. In the above graph, wheat exports dropped by more than 50% between 2011 and 2012. The massive decrease was largely due to the following factors: 1. Winter kill in the Southern and North Caucasian federal districts. 2. A decrease in soil moisture in the Urals and Siberia. 3. Shifts in sown areas. 4. A combination of high debt from farmers as well as lack of land investments, like irrigation improvement as well as crop insurance. (expected to take effect in 2013). The final factor is that government continued to support meat production rather than crops.⁵

A diversity of grains and related products such as sunflower seed oil have transformed Russia into colossal grain exporter for more than a decade. Earning the title of the fifth largest wheat exporter, exceeded only by USA, European Union, Canada, and Australia.⁶ In 2015 Bloomberg.com reported that from July 1 to January 14, the total grain exports from this season

⁵ Reynolds, Scott "Russian Federation Grain and Feed Annual for 2012." *USDA Foreign Agricultural Service*, 3/30/2012, http://gain.fas.usda.gov/Recent%20GAIN%20Publications/Grain%20and%20Feed%20Annual_Moscow_Russian%20Federation_3-27-2012.pdf

⁶ "FAO Agriculture and Trade Background Note: Russia" *FAO*, March 15, 2015, http://www.fao.org/fileadmin/templates/est/meetings/wto_comm/Trade_Policy_Brief_Russia_final.pdf

measures over 16.9 million tons.⁷ To curb the outflow so as to be able to support the domestic population, Russia is considering introducing a tax in 2015 to curb exports. This possible decrease in grain exports directly affects Russia's trading partners. The image below identifies Russia's top five wheat recipients:



For these countries, Russia has long been a reliable partner, supplying much of the Middle East and Northern Africa with grains, chiefly wheat. The reason for the longevity of these trading relationships is Russia's ability to maintain a competitive price. In January of 2015 the average price was 532.75 ¢ (\$5.33) / bushel.⁹ The projected 2015 price per bushel is \$5.90 to \$6.10.¹⁰ Supplying mainly to the Middle East has allowed Russia to develop a strong and viable

⁷ Medetsky, Anatoly "Russia Says Wheat Exports Were 16.9M Tons This Season by Jan. 14" *BloombergBusiness*, January 19, 2015, <http://www.bloomberg.com/news/articles/2015-01-19/russia-says-wheat-exports-were-16-9m-tons-this-season-by-jan-14>

⁸ Fig.3. Deardorff, Source: International Grains Council; Dow Jones Newswires. 2009, Digital Image. Available from: Wall Street Journal, http://sg.wsj.net/public/resources/images/WO-AC134_WHEAT_NS_20100815195802.gif (accessed March 6, 2015)

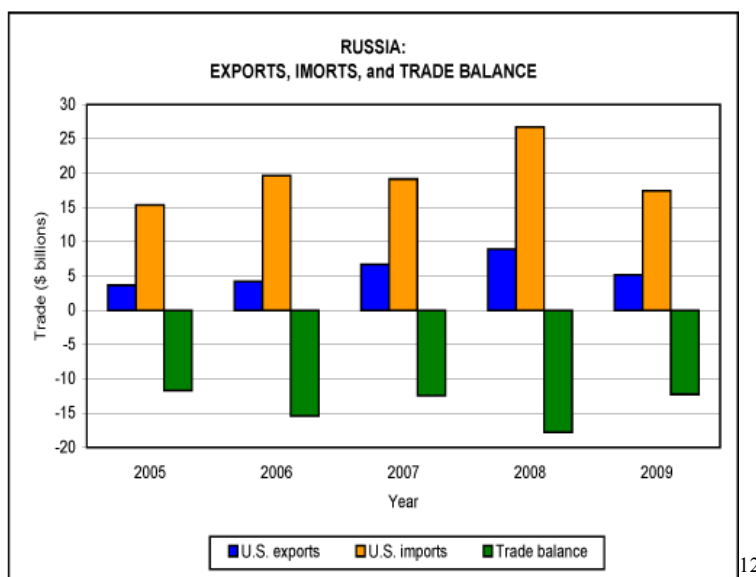
⁹ "Commodities" *CNN Money*, March 16th, 2015, <http://money.cnn.com/data/commodities/>

¹⁰ "World Agricultural Supply and Demand Estimates" *USDA*, April 9th, 2015, <http://www.usda.gov/oce/commodity/wasde/latest.pdf>

relationship. The rationale behind this profitable relationship is because bread is a staple food in the region, making wheat in high demand due to the region's low domestic growing capabilities.

Although not accounting for a large percentage of exports, the Russian Federation has a diverse range of agricultural products other than grains exiting its borders. Other notable products are tobacco, beverages, milk, oilseed cake meal, honey, and sugar. In the years 2008-2010, these products had the following percentages of the total agricultural exports: tobacco 6%, beverages 5.1%, milk, 3.1%, oilseed cake meal 2%, and sugar and honey combined at 18%.¹¹ Even though these totals are a mere shadow of those years' wheat exports (36.1%), variety in exportable products is an important strength when it comes to international market trade. Beverages, with a subcategory of spirits, are representative of Russia's historical vodka production, infamous around the world. While "variety is the spice of life," it is the essence of successful agriculture. However, this variety does not hide that Russia has been operating at an overall trade deficit, as seen in the graph below:

¹¹ "FAO Agriculture and Trade Background Note: Russia" *FAO*, March 15, 2015, http://www.fao.org/fileadmin/templates/est/meetings/wto_comm/Trade_Policy_Brief_Russia_final.pdf



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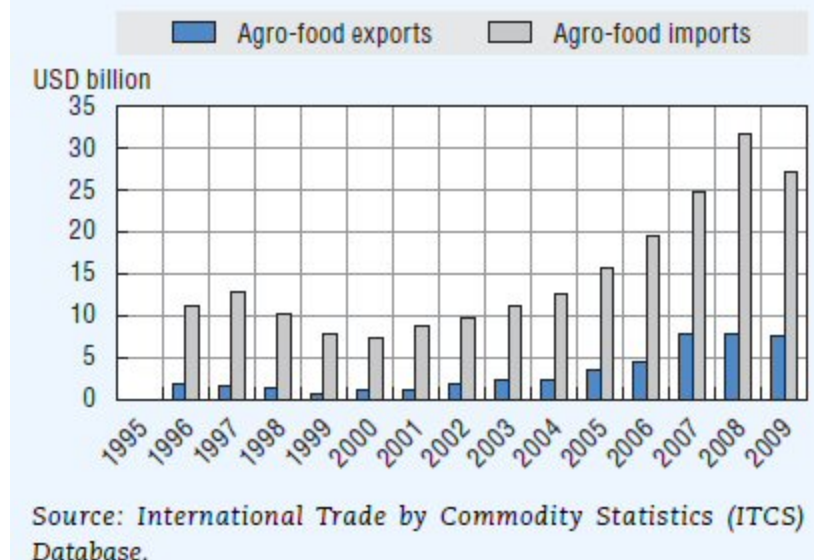
This trade deficit demonstrates that the population is exceedingly dependent on foreign agricultural products. The following list is the share in agricultural imports in percentages for the years 2008-2010: bovine meat 8%, beverages 7.4%, pork 7%, milk 5.1%, tobacco 4%, sugar and honey 3.9%, poultry meat 3.8%, and cheese 3.7%.¹³ The goods that Russia imports are far more evenly distributed than those that it exports, suggesting the country's heavy reliance on a variety of products that the country has had trouble producing domestically, at least at a quantity sufficient enough to support the population.

There are various reasons that Russia imports numerous agricultural products. In the years 2000-2008 imports have grown dramatically from \$7 billion in 2000 to \$33 billion in 2008, as represented in the below graph showing Russia's total agricultural trade over a decade:

¹² Fig.4. Source:USITC.GOV. 2009, Digital Image. Available from: USITC.GOV, http://www.usitc.gov/research_and_analysis/tradeshifts/2009/russia.htm?cid=1&1284088995696/ (accessed March 3, 2015)

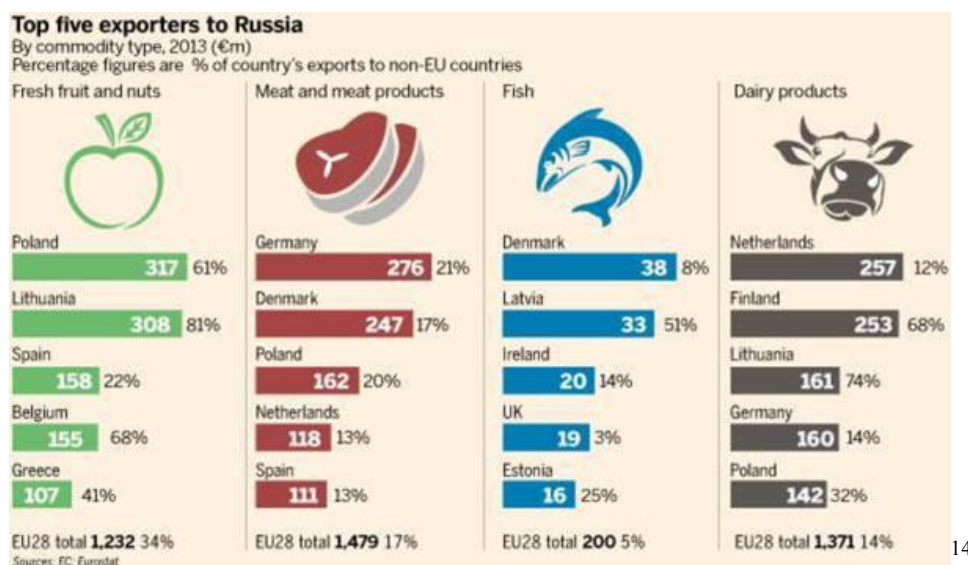
¹³ "FAO Agriculture and Trade Background Note: Russia" *FAO*, March 15, 2015, http://www.fao.org/fileadmin/templates/est/meetings/wto_comm/Trade_Policy_Brief_Russia_final.pdf

Figure 19.3. Russia: Agro-food trade, 1995-2009



This growth has metamorphosed Russia into one of the leading agricultural importers among emerging markets, keeping company with countries like China. The expanding purchase power of Russians has made buying international products an increasingly viable option. Russia's major cities, Moscow and St. Petersburg, have become increasingly demanding in terms of food tastes, as well as restaurant growth. The development of Russia's GDP results in the growth of consumer demand, which is positive for both international suppliers and domestic producers. The final reason is generally thought to be the appreciation of the ruble, which has largely been on the rise since the early nineties, until 2014.

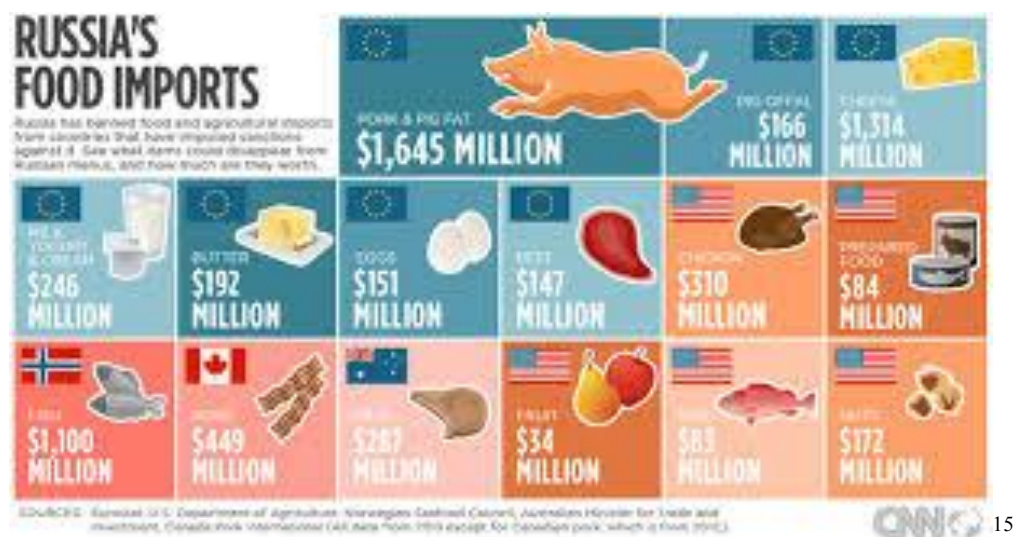
Not only does Russia have a large percentage of imports, but the countries that export to Russia are also varied. Below is a representation of the leading exporters to Russia including the products provided:



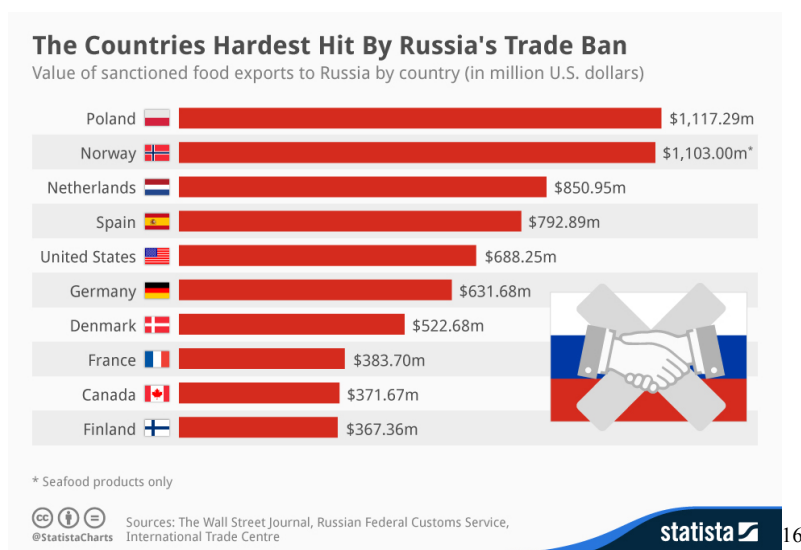
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As seen in the above graphic, Russia is most dependent on those countries that provide fresh fruits and nuts (accounting for a total of 34% of exports to Russia), as well as meat products. The Federation has weak domestic supply in these commodities and it is thus acutely dependent on countries like Poland and Lithuania. The majority of the trading partners are in the European Union. This is partially due to the geographical proximity to Russia, but is also directly related to the diversity of agricultural products that the countries provide. That is not to say that the European Union is the sole provider to Russia's agricultural needs. Throughout the nineteenth and twentieth centuries the Federation has established steadfast and lucrative trading relationships with other countries, including the United States (excluding the tumultuous time of the Cold War). The graphic below is representative of Russia's trading partners in dollar amounts, and illustrates what products are imported annually:

¹⁴ Fig.5. Source: EC Eurostat. 2013, Digital Image. Available from: Socio-Economics History Blog, <https://socioecohistory.wordpress.com/2014/08/25/russian-sanctions-its-a-catastrophe-the-cold-storage-warehouse-is-overflowing-with-fruit-that-we-cant-sell/> (accessed March 10, 2015)



Although not considered a top partner, the US provides Russia with billions of dollars worth of agricultural products such as chicken, processed foods, fish, fruits and nuts, making the relationship between these two nations significant. The US will be adversely impacted due to the sanctions, but not to the same extent as some nations in Europe. Below is a chart illustrating the losses for nations in US\$ millions:



¹⁵ Fig.6. Source: Eurostat, US Department of Agriculture, Norwegian Seafood Council, Australian Minister for Trade and Investment, Canada Pork International. 2013, Digital Image. Available from: CNN, <http://elremontenegro.blogspot.com/2014/08/europe-pays-farmers-to-destroy-food-hit.html> (accessed March 16, 2015)

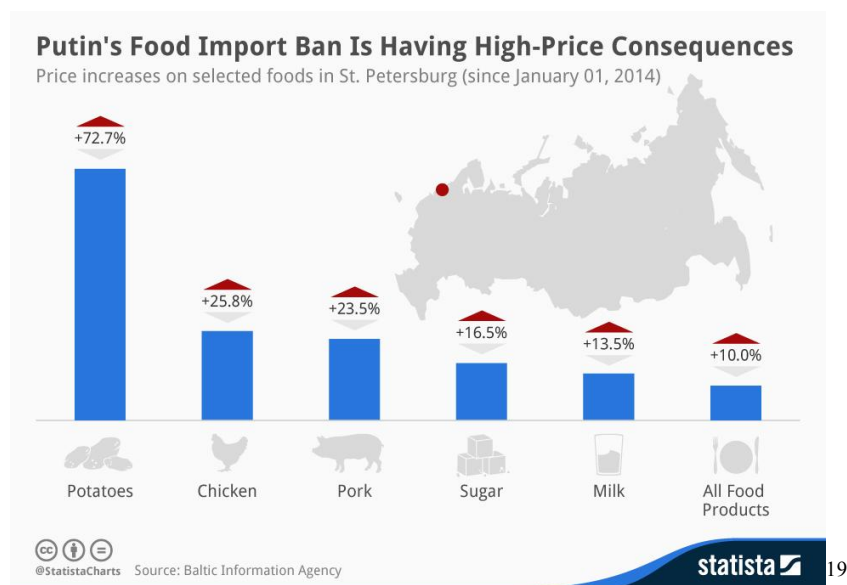
Agricultural imports and exports were dramatically changed in August of 2014 when the Russian government sought to retaliate against the sanctions and announced that it would ban food products from the US, EU, Canada, Australia and Norway. As demonstrated in the graphic above, this ban blocked billions of dollars worth of products from crossing Russian borders. The sanctions that were imposed on Russia were in reaction to Russia's military and political involvement in Ukraine. The bans are set to last one year. Although a year is trivial in many policy situations, these bans have left their mark on Russian agricultural market. Principally, the available variety foods have drastically decreased, leaving shoppers with fewer options. Secondly, food prices have risen as well, in some cases increasing more than 70%.¹⁷ In St. Petersburg a swelling urban population is finding food prices astronomically higher post-ban. The graphic below represents some of the most common foods consumed in the city, and consequently the percentages that they have risen to in early 2014 alone. It is not just an urban consumer's' problem. In February 2015 Mark Adomanis commented on the wide variety of inflated food prices for a variety of foods all over the country:

When you start to dig into the report and look at specific foodstuffs the already ugly headline numbers start to look even worse. Rice prices grew by 2.3% in just the past week (they've grown by more than 15% since December) while fish prices were up by 1.9% and 10.4% respectively. Other items that have experienced double digit inflation since December include onions (29.8%), carrots (31.8%), cucumbers (38.9%), and

¹⁶ Fig.7. Statista. Source: The Wall Street Journal, Russian Federal Customs Service, International Trade Center. 2014, Digital Image. Available from: Blogspot, <http://elre-montenegro.blogspot.com/2014/08/europe-pays-farmers-to-destroy-food-hit.html> (accessed March 9, 2015)

¹⁷ McCarthy, Niall "Putin's Food Import Ban Is Having High-Price Consequences", *Statista*, August 25th, 2014. <http://www.statista.com/chart/2611/price-increases-in-russia/>.

cabbage (46%). Yes produce prices usually go up in Russia over the winter, but not by such huge amounts.¹⁸



The final impact caused by the ban is an increased pressure on domestic producers and suppliers. Due to the food ban in Russia, at least in the short term, the domestic industry has been forced to be self-sustaining, shut off from the many foreign opportunities it once enjoyed. This pressure is tremendously cumbersome to a generation of farmers, manufacturers and suppliers.

III. The Foreign Policy of Russia in Relation to Agriculture

With a nation widely dependent on trade, it is imperative that the Russian Federation finds contemporary trading partners if its population is to be satisfied. The reason for this necessary transition is twofold. For the majority of Putin's time in office, his foreign policy has been characterized by disagreements with Europe and the US. Putin is at best finicky about who he decides to partner with, and often political disagreements turn into monetary conflicts; take

¹⁸ Adomanis, Mark, "Russian Inflation Is Getting Worse", *Forbes*, 2/14/2015, <http://www.forbes.com/sites/markadomanis/2015/02/14/russian-inflation-is-getting-worse/>

¹⁹ Fig. 8. Statista. Source: Baltic Information Agency. 2014, Digital Image. Available from: The Statistics Portal, <http://www.statista.com/chart/2611/price-increases-in-russia/> (March 11, 2015)

for example the recent food bans, or the previous threats to “turn-off the pipes” for natural gas for large parts of Eastern Europe. Domestically Putin has enjoyed high approval ratings as well as support for the ban. However, it is imperative for Russia to strengthen relationships with trading partners with whom it is less politically at odds. There are few times in modern history where the United States, Europe, and Russia have stood as a unified force. These tumultuous relationships are far more detrimental the larger the trading relationships are. In spite of the fact that both the European Union and the United States benefit economically from agricultural trade with Russia, the time of friendship may be coming to an end, or at least become strained in the twenty-first century.

The State of the Union Address is one of the most impactful speeches that the president gives to the American people annually. In addition to a summary of the past year’s events, the address also pinpoints the administration’s goals for the future. In a most stark and confident statement President Obama briefly commented on the state of the Russian Federation, and the United States’ future relationship with it:

We’re demonstrating the power of American strength and diplomacy. We’re upholding the principle that bigger nations can’t bully the small -- by opposing Russian aggression, and supporting Ukraine’s democracy, and reassuring our NATO allies. Last year, as we were doing the hard work of imposing sanctions along with our allies, as we were reinforcing our presence with frontline states, Mr. Putin’s aggression it was suggested was a masterful display of strategy and strength. That’s what I heard from some folks. Well, today, it is America that stands strong and united with our allies, while Russia is isolated with its economy in tatters. That’s how America leads -- not with bluster, but with persistent, steady resolve.²⁰

²⁰ Secretary, Press, “Remarks by the President in State of the Union Address”, *The White House*, January 20, 2015, <https://www.whitehouse.gov/the-press-office/2015/01/20/remarks-president-state-union-address-january-20-2015>.

The words uttered above were ones of defiance, not peacemaking. In the last year, the United States has made clear that it will not accept Russia's decisions, political or otherwise. European leaders have also condemned Russian actions, and although Europe is now faced with a surplus of food, they are similarly not willing to trade with the Federation in the near future. To comprehend the inherent distrust of both the United States and the European Union for Russia, one must understand the man in the Kremlin: Putin.

The importance in understanding Putin is that he exerts a greater amount of direct leadership power than his western counterparts. This includes decisions about agriculture. The face of Vladimir Putin has become synonymous with Russia in the twenty-first century. Although the majority of this paper will discuss the imports and exports of the agricultural sector, the Russian government without Putin's approval makes no decision. Thus, it is important to understand how this man's thoughts turn into policy. Russia as a country has not been more controlled by the government since the days of Stalin. Although Putin does not have the same vile reputation in the international community, he is often thought of as rogue, stubborn, easily angered, and isolationist by the Western world. Domestically Putin enjoys a different reputation, he is thought of as strong, "macho," clever, effective, and decisive. Despite his high approval ratings, with actions such as those taken in Ukraine and the imposition of agricultural sanctions against the US and EU have been viewed unfavorably in Western international circles.

In a world becoming increasingly subject to globalization, Putin does not shy away from isolating himself and his country in attempts to be domestically, politically or economically successful. He has made repeated statements to this effect, stating sentiments such as, "sometimes it is necessary to be lonely in order to prove that you are right."²¹ The nationalist

²¹ "Vladimir Putin Quotes", *BrainyQuote*, March 9, 2015, <http://www.brainyquote.com/quotes/quotes/v/vladimirpu601106.html>

belief is strong within the nation's borders, and he often plays to this feeling and consistently speaks about a united Russia. Russia is presented as a domestic and international force that cannot be stopped in the achievement of its ultimate goals: "at last, Russia has returned to the world arena as a strong state - a country that others heed and that can stand up for itself."²²

Although Russia holds a prominent place in international forums such as the UN, and possesses a veto at the table of the influential Security Council, Putin and his administration have never been thought of as particularly flexible. Throughout his service in the government, Putin has made it clear that the interests of Russians come before anything else, including the betterment of the international community. Putin has come out publicly in support of the workings and traditions of the UN:

No one wants the United Nations to suffer the fate of the League of Nations, which collapsed because it lacked real leverage. This is possible if influential countries bypass the United Nations and take military action without Security Council authorization.²³

At a speech at the Valdai Club in October 2011, Putin again reiterated his opinion of global regulations:

The Cold War ended, but it did not end with the signing of a peace treaty with clear and transparent agreements on respecting existing rules or creating new rules and standards. This created the impression that the so-called 'victors' in the Cold War had decided to pressure events and reshape the world to suit their own needs and interests. If the existing system of international relations, international law and the checks and balances in place got in the way of these aims, this system was declared worthless, outdated and in need of immediate demolition.²⁴

²² "The Triumph of Vladimir Putin", *The Economist*, February 1st, 2014, <http://www.economist.com/news/leaders/21595451-successes-abroad-and-winter-olympics-make-russia-look-strong-where-it-matters-it>

²³ "Vladimir Putin Quotes", *BrainyQuote*, March 9, 2015, <http://www.brainyquote.com/quotes/quotes/v/vladimirpu584362.html>.

²⁴ "Putin's speech at the Valdai Club - full transcript". *The Vineyard of the Saker*, October 25, 2011, <http://vineyardsaker.blogspot.com/2014/10/putins-speech-at-valdai-club-full.html>.

In his latest policies, including the food bans, Putin has placed Russia into a position where new partnerships are necessary, both agriculturally and otherwise.

The desire for the ban was twofold, first Russia would make a political stand against those countries condemning their actions in Ukraine, and secondly it was the hope of Putin that, by banning those products that Russia had become dependent on, Russia would start to become a stronger domestic producer of agricultural goods, thus diminishing the need for heavy reliance on foreign investment and trade. President Putin's main goal is to unite a country whilst hoping to push forward in domestic production of food; this is largely his agenda for the near future.

Below is an excerpt from the Wall Street Journal, outlining his potential plans:

It also serves Mr. Putin's domestic agenda by potentially boosting agricultural production at home and encouraging consumers to buy homemade goods amid a sluggish economic outlook. Mr. Putin has promoted greater self-sufficiency for Russia, a message that plays well to a political base nostalgic for the days when the Soviet Union celebrated domestic production.²⁵

Agriculture is a subset of Russia's overall foreign policy strategy. Agriculture has taken the center stage because it exemplifies and illustrates Russia's desire to separate itself from the West. With a larger foreign policy goal of making Russia more independent as a nation the agricultural industry is where, for now, Putin wishes to demonstrate Russia's resilience and domestic skill in both production and acquiring new international trading partners.

²⁵ Troianovski, Anton and Sonne, Paul, "Russia Bans Food Imports in Retaliation for Western Sanctions", *The Wall Street Journal*, August 7, 2014, <http://www.wsj.com/articles/russia-bans-food-imports-in-retaliation-to-western-sanctions-1407403035>

IV. Problems with Russia's Domestic Agriculture: Why Simply Producing More Proves Difficult

Although many Russians are supportive of decreased Western dependency, the outlook for heightening domestic agricultural production does not look positive for the near future. This is in part due to numerous structural domestic problems that have become more acute for Russian farmers since the food ban was instituted. In November of 2014 the *Moscow Times* published an article explaining one of the major hindrances for increased domestic agricultural production: the ability for small farmers to get loans:

Small Russian farmers received 50 percent less loans year-on-year in September, according to a report by consumer credit reporting agency Equifax. Large agricultural producers fared better, but still saw loans fall by 15 percent . . . and making matters worse, more and more farmers are having difficulty paying off existing loans. Equifax found the number of agricultural loans with overdue payments has risen from 1.2 percent of loans taken out in 2012 to 2.4 percent of 2013 loans.²⁶

The inability to get credit and pay loans is only exacerbated by already existing problems such as poor infrastructure limiting access to markets and high lending rates.

In an industry that has never been known for its elasticity, it may take years for the average Russian farmer to increase production, a time crunch Mr. Putin is not factoring in or is simply choosing to ignore. Although the import bans are set for only one year, the damage has already been done and continues to grow in a nation wholly unprepared to dramatically expand its domestic agricultural production. The director of the Center of Agricultural Policy at economic research university RANEPA (The Russian Presidential Academy of National Economy and Public Administration) comments that increasing Russian agricultural production will take at least five years, and only provided that there is substantial investment and effective

²⁶ d'Amora, Delphine, "Russia's Small Farmers Struggle to Get Loans", *The Moscow Times*, November 12th, 2014, <http://www.themoscowtimes.com/business/article/russia-s-small-farmers-struggle-to-get-loans/511064.html>

state policies.²⁷ With the severity of the effects of these bans, Russia has to have a series of calculated and precise economic measures that effectively push the country into warp speed in terms of agricultural development. This series of events is unlikely to happen.

The shortage of available loans is only the beginning of Russia's domestic agricultural production difficulties. Land availability and possible bankruptcies also plague those who wish to start in agricultural production. Those who desire to start their own small farm in order to boost the local economy cannot, because of how land is distributed in Russia. Grigory Ioffe, one of the foremost scholars on Russian agriculture, briefly describes who owns land:

Officially, the collective farm sector remains the largest landholder; it controls 81.9% of farmland, versus 11.3% controlled by household farms and 6.8% by registered private farms. However, 83-86% of the 27,000 collective farms are *de facto* bankrupt: their costs exceed revenues and they are delinquent on their debit payments. About 14,000 farms have their bank accounts frozen by the government because of their dependency on several loans. Therefore they cannot solicit a new loan to purchase fuel and machinery...with a semi-natural economy that will not repay their debt under any circumstances at all.²⁸

Russian agriculture is in a self-destructive cycle. Those who wish to start farming, regardless of the scale, are faced with enormous odds. The interest rates are high, and availability of loans is low. Because farmers cannot readily pay back their existing loans there is a culture of mistrust between lenders and borrowers. Then, if the farmers manage to make a profit initially, they are still likely to go bankrupt after a short time due to the ongoing needs to pay down the high cost of machinery or acquire new equipment to increase productivity, with the impact of market forces and weather unlikely to provide reliable support. As these negative consequences are

²⁷ d'Amora, Delphine, "Russian Farmers Will Need Years to Fill Gaps Left by Food Ban", *The Moscow Times*, August 14th, 2014, <http://www.themoscowtimes.com/article/russian-farmers-will-need-years-to-fill-gaps-left-by-food-ban/505147.html>

²⁸ Ioffe, Grigory, "The Downsizing of Russian Agriculture" *Taylor and Francis Group*, 57, no. 2 (2005): 182 accessed 08/09/2014. <http://www.jstor.org/stable/30043869>.

cyclical it creates a self-perpetuating problem. This generates a decidedly hostile environment for both prospective and current farmers.

Due to this environment and the almost nonexistence of incentives provided by the government, farming in Russia is not considered to be an attractive or successful career path. In 2010 26% of the Russian population lived in rural areas.²⁹ Though not a seemingly large portion of the country, those living in rural areas have accesses to some of Russia's most arable land, and the space to produce the crops needed to feed the country.

In addition to the problems provided above which are largely controlled by human factors, there is another barrier standing in the way of Russia ever becoming a domestic producer in many agricultural sub-categories such as fruits: the soil. A journal article detailing the deterioration of Russian soil states,

The analysis shows that more than 14.5% (243 million ha) of the Russian territory is affected by soil degradation caused by a variety of reasons, including socio-economic changes, and improper management and technology. The assessment reveals that the rate of soil degradation and loss of soil productivity in Russia has been fairly rapid.³⁰

The problems in Russian agriculture are not only of a small farm and rural nature; large agri-businesses also have their fair share of inconveniences and problems. In a study done for the Southern Regions of Russia in 2009, researchers describe large-scale cereal production. Research suggests that the problems that plague the small farms also wreak havoc for the large agri-businesses that produce Russia's immense crop of grains:

²⁹ "Urban /rural division of countries for the year 2010", *GEOHIVE*, April 1, 2015, http://www.geohive.com/earth/pop_urban.aspx

³⁰ Stolbovoi, Vladimir and Fischer, Günther, "A New Digital Georeferenced Database of Soil Degradation in Russia", *International Institute for Applied Systems Analysis*, March 15, 2015, <http://citeseerx.ist.psu.edu/viewdoc/download?doi=10.1.1.56.689&rep=rep1&type=pdf>

Due to the specific nature of Russia's land reform access to land for the investors is coupled with high monetary and time expenses. Many land shareholders, especially in the southern part of the country where land has truly high value, wait for an opportunity to sell their plots at higher prices. In the four densely populated regions under consideration, the highest prices for land are offered not by agricultural investors but by developers or individuals for housing. Therefore, investors in agriculture face the difficulty of accumulating land for establishing farms. Cereal production, for example, is undoubtedly hampered by this fact.³¹

Not only has obtaining land been a constant problem but also the laws surrounding land tenure, once land has been purchased:

New legislation, adopted in the early 2000s imposed very sophisticated and extremely bureaucratic procedures of land consolidation and registration. This has also become a serious obstacle to investment into cereal production. In the survey more than 17% of cereal food chain experts indicated that land tenure is a problem in the sector.³²

This research conducted in the southern region of Russia Suggests that not only is availability of support and funding lacking for small farmers, but large farms are also hindered by the laws the government has put into place. Where government and agriculture collide, sparks fly. In an insightful interview Aleksey Pavlov, Unilever group procurement operations director for Russia, Ukraine and Belarus, states that the problems with large scale agriculture in Russia are widespread and often lack foreign investment:

There are a lot of things, which restrict Russian agricultural development. For example, local production lags the rest of the world in utilizing the latest practices and technology. That, in turn, lowers the competitiveness of Russian agricultural producers. Domestic agriculture also has a great need of floating capital, which has a long turnover period because of seasonal harvests. Besides in climatic terms big part of

³¹ Stolbovoi, Vladimir and Fischer, Günther, "A New Digital Georeferenced Database of Soil Degradation in Russia", *International Institute for Applied Systems Analysis*, March 15, 2015, <http://citeseerx.ist.psu.edu/viewdoc/download?doi=10.1.1.56.689&rep=rep1&type=pdf>

³² Stolbovoi, Vladimir and Fischer, Günther, "A New Digital Georeferenced Database of Soil Degradation in Russia", *International Institute for Applied Systems Analysis*, March 15, 2015, <http://citeseerx.ist.psu.edu/viewdoc/download?doi=10.1.1.56.689&rep=rep1&type=pdf>

Russia is in a region of marginal conditions, which means that conditions can vary greatly from year to year and have a very significant impact on production.³³

In addition to complications with capital, the small farmer and large agribusiness men are brought together once again by the ongoing lack of a young work force.

Amount of qualified professionals in agriculture is not as good as it should be. There is significant migration from rural areas to urban ones and staying in rural areas is not attractive for young people. Even after graduation from higher education institutions in professions like agronomist, young people rarely return to work in villages.³⁴

It is once again clear that Russia will not be able to quickly increase domestic production to cover the losses of Western trade. What Russia needs is time. Any industry requires ample time in order to adjust to changing markets, develop a strong and trained workforce, as well as lobbying to put into place laws that help, not hurt, the industry. Because Russia has had so many imports, the domestic market has never been tested to this degree. These conditions were present before, but are now exposed due to Russia's agro trade ties to the West virtually evaporating. The only way to help develop the agricultural industry is to strengthen domestic production whilst finding other international trading partners coupled with foreign investment:

Under current materials supply market economic conditions it's clear that considerable time will be required to develop Russian agriculture. Industry will need to attract high levels of investments from state and foreign investors.³⁵

However despite all of these problems there has been a significant positive change in the past decade. Stephen Wegren, leading expert on Russian agriculture, comments in a 2014 article:

³³“Russian agriculture from the global perspective”, *RT*, March 31, 2011, <http://rt.com/business/russia-agriculture-perspectives-unilever/>.

³⁴“Russian agriculture from the global perspective”, *RT*, March 31, 2011, <http://rt.com/business/russia-agriculture-perspectives-unilever/>.

³⁵ “Russian agriculture from the global perspective”, *RT*, March 31, 2011, <http://rt.com/business/russia-agriculture-perspectives-unilever/>.

During the past 20 years Russia has developed its own food industry. Many processed products that appear to Russian consumers to be imports are actually made in Russia. The food ban will benefit Russian food companies by limiting alternative choices and by familiarizing the Russian consumer with domestic brand names. Moreover, the government has increased financial support for agricultural producers by R87 billion in 2014 to spur domestic production and to help them cope with the embargo.³⁶

In the long term the ban may indeed prove to help strengthen the sector and be beneficial to Russian agriculture as a whole. However, as mentioned in the above sections, the ban will hurt Russia in terms of food variety:

There are some banned imports that Russian agriculture cannot easily replace. Russia cannot, for example, simply plant apple trees to replace Polish apples in one year. The same is true for beef and dairy cattle, both of which continue to have depressed livestock numbers compared to the early 1990s. Consumer products most affected by the food ban are high-end edibles that cater to the upper-middle class and above, products such as Norwegian smoked salmon, French cheese, or Italian processed meats.³⁷

Although these items may seem like delicacies, they do in fact hinder the Russian consumer in terms of the availability of key international foods. Wegren predicts that the middle class will be the hardest hit.

Middle class Russian consumers may be squeezed in several ways. Following the introduction of the third round of sanctions, the ruble fell against the dollar and euro, thereby making foreign travel and the purchase of foreign foodstuffs more expensive for Russians who go abroad. In late September the Ministry of Economic Development predicted that food inflation would reach 12–13 percent by the end of 2014, up from its previous estimate of 6–7 percent.³⁸

³⁶ Wegren, Stephen K, “Russia’s Food Embargo”, *Russian Analytical Digest No. 157*, December 17, 2014, <http://www.css.ethz.ch/publications/pdfs/RAD-157.pdf>

³⁷ Wegren, Stephen K, “Russia’s Food Embargo”, *Russian Analytical Digest No. 157*, December 17, 2014, <http://www.css.ethz.ch/publications/pdfs/RAD-157.pdf>

³⁸ Wegren, Stephen K, “Russia’s Food Embargo”, *Russian Analytical Digest No. 157*, December 17, 2014, <http://www.css.ethz.ch/publications/pdfs/RAD-157.pdf>

The lack of variety, degraded soil, the limited availability of loans, difficulties obtaining land, the lack of a rural elite, prominence of a largely unprofitable rural barter economy, shortage of a sufficient workforce, lack of foreign investment, and the time that Russia needs to address these issues, unfortunately, are in short supply. These problems will prove insurmountable for farmers to overcome in the near term. This leaves a nation dependent on imports. Therefore the Russian Federation must look to find new trading partners if its population is to be adequately fed and the sanctions with the US and EU are to continue.

V. Russian Options

In looking to its agricultural future Russia has essentially three options in order to replace the agricultural imports that it has lost. The first is that Russia could simply do without. Although Russia would be missing out on billions of dollars worth of food and related products, the Russian population would not starve. Basic products are available. But there is another danger that is far more perilous than an empty stomach; it is the idea of lack of diversity. For centuries, Russian elites have always looked to Europe. After he became Tsar, Peter the Great decided to change the fashions of those in his circle because he wanted Russia to move into an era of sophistication. The same can be said for the grocery aisle. Gone are the constricting days of the Soviet Union. Russians do not want only Russian products, they want international ones. As Russian household incomes have increased so has their desire for international cuisine. This trend is not unusual, the Chinese have experienced a similar palette change in the past decade. The money in Russian is concentrated in the two major cities, Moscow and St. Petersburg. Forbes magazine stated in 2013 that Moscow is the “billionaires capital,” boasting 84 of the

world's richest individuals.³⁹ Credit Suisse calculated that in 2013 just 110 billionaires controlled more than a third of Russia's wealth.⁴⁰ But, it is not just the extremely rich that want the grocery store to be internationally based. With increased wealth comes the desire for goods beyond what Russia can provide. If Russia wishes to maintain a society in which its citizens are allowed to continue their consumerist habits it cannot go without the food and agricultural products that have been available on the shelves before the sanctions were imposed.

The second option for Russia is to substitute domestically, but, for the reasons outlined above, that is almost impossible for Russia to do because of problems with loans, infrastructure and workforce. The only other option is for Russia to replace food imports internationally.

The European Union boasts an immensely large portfolio of agricultural exports; the European Commission says that in 2015 there are over 12 million farmers and the agricultural sector alone supports more than 46 million jobs.⁴¹ For much of history agricultural trade between these two giants has been successful based on the European need for oil and gas coupling nicely with the Russian Federation's desire for a diverse agricultural market. Economically, this relationship would still be profitable. Europe is interested in Russian gas. Although many European countries are moving towards developing renewable energy technologies, such as Germany who leads the way, oil and gas are still essential commodities. However the relationship between these two powers does not work smoothly due to the political climate, not

³⁹ Geromel, Ricardo, "Forbes Top 10 Billionaire Cities - Moscow Beats New York Again", *Forbes*, March 14, 2014, <http://www.forbes.com/sites/ricardogeromel/2013/03/14/forbes-top-10-billionaire-cities-moscow-beats-new-york-again/>

⁴⁰ Stewart, Will, "Two decades after the fall of communism, 35 per cent of the household wealth in Russia belongs to just 110 billionaires", *DailyMailNews*, April 13th, 2015, <http://www.dailymail.co.uk/news/article-2451854/35-cent-household-wealth-Russia-belongs-just-110-billionaires.html>

⁴¹ "The common agricultural policy (CAP) and agriculture in Europe – Frequently asked questions", *European Commission Press Release*, June 26, 2013, http://europa.eu/rapid/press-release_MEMO-13-631_en.htm.

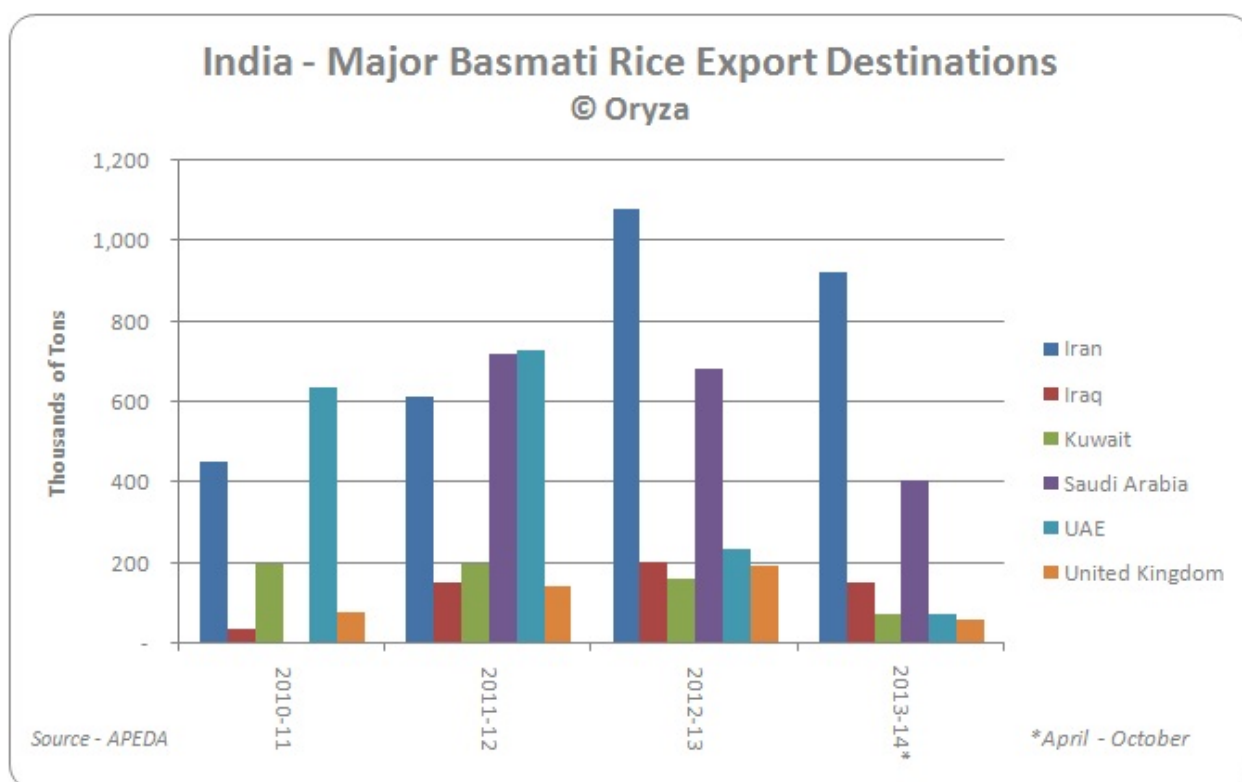
the economic one. Russia must look to nations that are not so politically and ideologically distant as the West is currently.

In addition to looking for new partners the trade itself in terms of agriculture must be thought of in multiple steps. When looking to trade with another country one must look at the transaction in two stages. First, the country wishing to trade must have funds to do so. Second, the country wishing to trade must look for products that they want. The importance of having these two separate steps is essential to the success of the Russian Federation's agricultural trade policy. In others words, Russia needs to make money using its exports in order to purchase imports. This seems like a fairly simple principle but it is integral to Russia because any other way would lead the Federation use a barter system, which would be disastrous. As mentioned in a previous section much of rural Russian agricultural trade operates on a barter system, i.e. "you have fruit, I need fruit, I have eggs, you need eggs, let's trade." Although this works successfully on a micro scale it will not work on the macro level. In order for Russia to make money off its exports it must continue to ship out gas and oil and petroleum products. The non-western countries that are in need of oil are India and China among others. These two nations have two of the fastest growing economies in the world, and need oil to fuel their nation's prosperity.

In looking generally to the East, China and India may at first glance appear to be attractive trading partners but they will ultimately fail to satisfy Russia's import needs. The agricultural facts for India and China are deceptively optimistic at first glance. India is the world's number one producer of milk, mangoes, bananas, and the second largest in fruits and vegetables and well as fish.⁴² Producer does not mean exporter. India has one of the largest populations in the world. The food that the country produces can barely feed its own population.

⁴²"Agriculture And Food Industry In India", *India Brand Equity Brand Foundation*, March 2015, <http://www.ibef.org/exports/agriculture-and-food-industry-india.aspx>

In 2012 there were 360 million people in India living below the poverty line: approximately 30% of the total population.⁴³ The average small family farm in India is 1 hectare (approximately 10,000 square feet), and the estimate projected for 2030 is that small and marginal farmers will account for over 91% of landholdings in the country.⁴⁴ With all of these statistics taken into consideration it is likely that India will not be able to produce enough agriculturally to be an adequate trading partner for Russia. This is not particularly because the food is not being grown; indeed India has substantial rice export abilities. Below is a graph representing the destinations of the two major types of rice India exports:



However, that particular grain, along with India's wheat production, would not be optimal products for the Russian market. Domestically the country has problems with effective supply

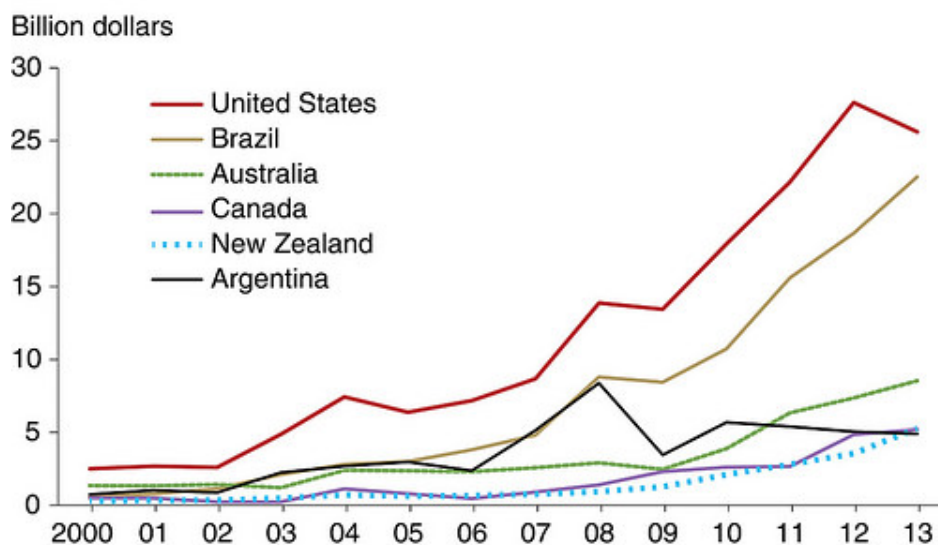
⁴³ Biswas, Soutik, "Who are the poor in India?", *BBC News*, March 2012, <http://www.bbc.com/news/world-asia-india-17455646>

⁴⁴ Ayyappan, S, "Family Farms: Farm, Feed & Flourish", *Naasindia.org*, March 10, 2015, <http://naasindia.org/documents/Presidential%20Address.pdf>

chains and this is coupled with infrastructure problems, lack of access to new technologies, and credit.

This same logic holds true for China. Like India, China is one of the fastest growing countries in wealth. With a similar agricultural portfolio as India, China is one of the largest agricultural producers in the world by percentage. The country produces 18% of the world's cereal grains, 29% of the world's meat, and 50% of the world's vegetables.⁴⁵ Again a producer does not make an exporter. The Chinese population continues to grow at a rate of .5% and is now over 1.5 billion in 2015.⁴⁶ In fact, China imports billions each year in agricultural products.

China agricultural imports, by supplying country, 2000-13



Source: USDA, Economic Research Service analysis of China's customs statistics reported by the Global Trade Atlas (2014).

Once again, this is a population that is heavily dependent on agriculture for mostly domestic reasons, not as a chief exporter. In its exports, China will continue to be a

⁴⁵ Carter, Colin A., "China's Agriculture: Achievements and Challenges", *Giannini Foundation of Agricultural Economics University of California*, March 8, 2015, http://giannini.ucop.edu/media/are-update/files/articles/V14N5_2.pdf

⁴⁶ "China Population", *Worldmeters*, March 5, 2015, <http://www.worldometers.info/world-population/china-population/>

manufacturer, and not an international farmer. So with both of these nations it would not be realistic for Russia to turn to them in terms of an even exchange when it comes to agricultural products. When it comes to bartering the strategy will not work on a macro scale. It is W.H Auden who says,

Almost all of our relationships begin and most of them continue as forms of mutual exploitation, a mental or physical barter, to be terminated when one or both parties run out of goods.⁴⁷

Although Russia cannot do an even exchange agricultural barter with India and China these two nations are an integral part of one the first step in Russia's agricultural trade plan, i.e. they are countries Russia can trade with to make money in order to buy agricultural goods from elsewhere. In order for Russia to make money in terms of exports it must stay true to what it has done best for centuries, oil, petroleum products and natural gas. Often referred to as a petro-state, Russia has always had a love affair with black gold. There is no Russia without oil, and for the past few centuries there has been no large percentage of oil and natural gas exports without Russia. Part of the nation's identity lies with its chief exports, although it is a country known around the world for its vodka it is also known as one of the countries that helps to fuel the world. This dependency on oil and natural gas will not soon waver, and Russia should take every advantage it can in the world market by exporting the products it has in abundance Scottish novelist James Buchan notes this dependency when he states,

A century ago, petroleum - what we call oil - was just an obscure commodity; today it is almost as vital to human existence as water.⁴⁸

Luckily, for now the world is not yet free of its oil habit, and this necessity is what will ultimately allow Russia to maintain an export revenue sustainable enough to fund its agricultural imports. In other words Russia should continue to do what it does best.

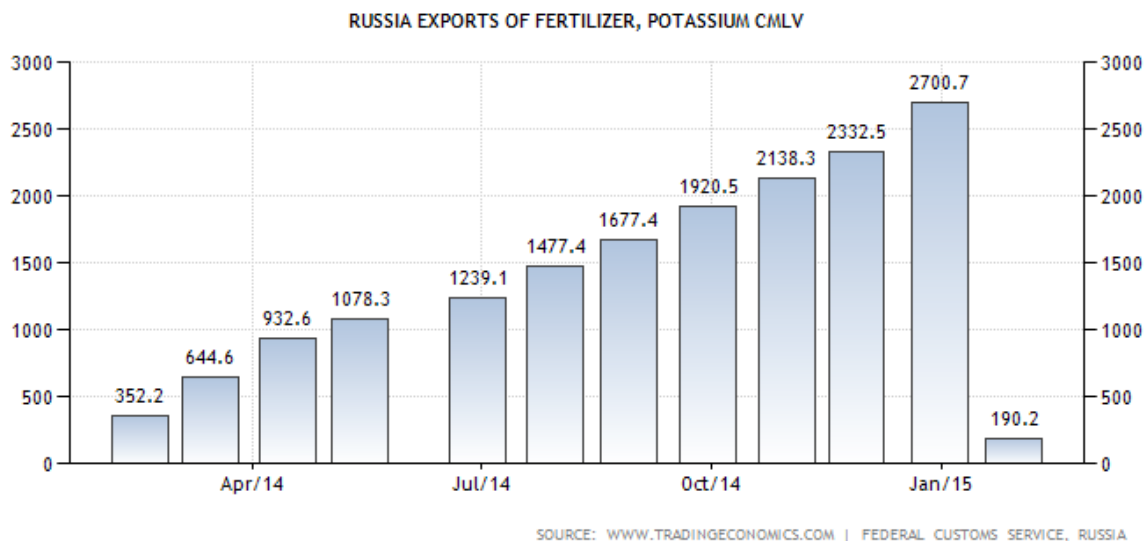
⁴⁷“Barter Quotes”, *BrainyQuote*, March 6, 2015, <http://www.brainyquote.com/quotes/keywords/barter.html>

⁴⁸“Oil Quotes”, *BrainyQuote*, March 2, 2015, <http://www.brainyquote.com/quotes/keywords/oil.html>

Although oil and natural gas may be considered to be “safe” options for Russia, fertilizer is another option for export revenue. It is not to suggest the Russia has not taken advantage of this pseudo-agricultural product. Indeed, 79% of all fertilizers produced in Russia in 2010 were exported⁴⁹ Essentially all of the main components that are used to make fertilizer are found within Russia’s borders, as they possess all major feedstock needed in fertilizer production. Potash, which is a sub-type of fertilizer, and Manganese, volumes of which that are available to export in increased amounts in 2010 and are expected to grow a rate of 6.2% annually. Most of the product is shipped through Baltic Sea ports, with about 68% of total exports, and 8% being shipped by land to the East.⁵⁰ Because Russia has such a diversity of fertilizers that it makes there are a vast number of soils in the world that would be compatible with any number of products produced. In addition to being domestically sufficient in the production of this good it is extremely useful to Russia that fertilizer shares some commonalities with natural gas and oil; in the world economy right now, everyone needs it. Fertilizer is necessary for growing whether you are an individual farmer or operating on an industrial scale, and many customers exist in between. Similar to the United States, Russia is a leading exporter in fertilizer, and it should continue to have a strong presence in the world market.

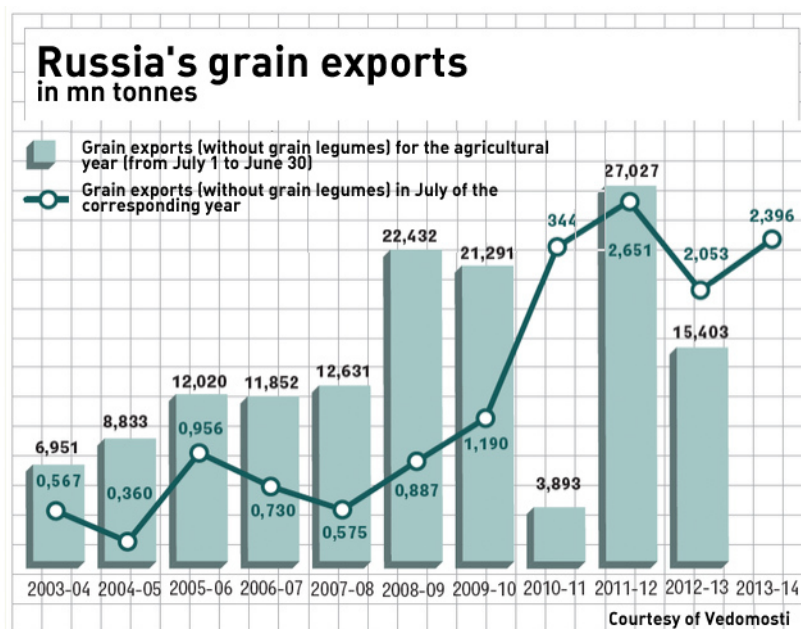
⁴⁹ Enikeeva, Karina, “Russian Fertilizer Landscape: Opportunities and Challenges for the next 10 years”, *SIBUR-Fertilizers*, September 21, 2011, <http://www.gpcafertilizers.com/pdf/2011/16.pdf>

⁵⁰ Enikeeva, Karina, “Russian Fertilizer Landscape: Opportunities and Challenges for the next 10 years”, *SIBUR-Fertilizers*, September 21, 2011, <http://www.gpcafertilizers.com/pdf/2011/16.pdf>



The last option for Russia to make export revenue would be through its production of wheat.

Much like oil, natural gas, and fertilizer the Russian Federation seems to have no shortage.



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⁵¹ Fig.9. Vedomosti. Source: RT. 2013, Digital Image. Available from: RT, <http://rt.com/business/russia-grain-exports-july2013-100/> (accessed March 6, 2015)

Just like oil, natural gas, and fertilizer Russia must again do what it does best and continue to increase exports of wheat.

Through making suggestions in order for Russia to increase revenues, the plan may seem quite simple, and indeed it is. Russia has never been known for innovation. For centuries Russia has been described as powerful, influential, and at times a risk-taker, but never truly an innovator. In order for a country to make revenue the nation must make and sell what they have a lot of and what they are good at. Some call for Russia to revolutionize its domestic agricultural system, and indeed, as highlighted above, there are many problems that need fixing. Putin himself has suggested that, through these sanctions, Russia will come to prosper and indeed that may be true. But for the case of this thesis it is only of concern in the short term. For the foreseeable future Russia does not have time for innovation. It has time for international trade creativity and new partnerships. It does not have time to change what it is sufficient at producing and exporting, it has time to use only what it has for the past decade. If there is a time for Russia to be innovative with its agricultural sector, it would be after some of the most important mouths in the nation are satisfied, not in the immediate wake of the bans.

The Russian Federation has forever been caught between the east and the west. The geographic expanse is vast, making the country the largest in the world. Due to this massive landscape the country has many divisions, east and west, rural and urban, and rich and poor. With 74% of the Russian population living in urban areas⁵² the country, for the majority of the last two centuries, both the Russian population as well as the individual mind has been caught between Eastern and Western ideals. With many Russian families having friends and family living in both Asia and Western Europe, Russia has both personal and cultural ties with the two

⁵² World Bank Staff, "Rural Population (% of Total Population)", *The World Bank*, <http://data.worldbank.org/indicator/SP.RUR.TOTL.ZS>.

regions. In many ways it will be difficult to Russia to essentially reinvent part of its identity, for indeed as far back as Peter the Great, the European way of doing things has been idealized. It is not to say that the country will lose all of its European ties; that will hardly be the case. But due to the reality the country faces in its relationship with the United States, the European Union, Canada, Australia, and New Zealand, the Federation has no choice but to shift its economic and trading perspectives elsewhere.

Agricultural trade may be another pawn in a larger chess game in which Russia is moving in an eastern direction with its policy. Author Bobby Loo, current head of European Policy Think Tank specializing in Russian affairs, comments on Russian-Asian relations:

Over the next decade, Putin will continue to prioritize the relationship with Beijing, and Russia's China-dependence will increase despite efforts to diversify ties with Japan, Vietnam, and India. Economic engagement will be dominated by energy exports, although Russia will be a niche rather than a primary supplier of Asian requirements. More generally, the Asia-Pacific will remain a secondary 'vector' for Moscow, and the vision of Russia as a 'Euro-Pacific power' aspirational at best.⁵³

For the Russian Federation, turning east is a smart decision. That region of the world has become economically prosperous in various markets and countries like China will continue to be on the forefront of production for the foreseeable future. However, there are challenges, and his policy shift has been fated by some to fail.

But for all the rhetoric about a 'turn to the east,' Russia's commitment to a serious engagement with the Asia-Pacific is uncertain. Its elite retains a strongly Western-centric view, even as it criticizes Western shortcomings. Although Moscow has begun to appreciate Asia as important in and of itself, it is mainly

⁵³Lo, Bobo, "Russia's Eastern Direction-Distinguishing the Real from the Virtual", *Russia/NIS Center*, January 2014, <http://www.ifri.org/sites/default/files/atoms/files/ifrirnr17boboloeasterndirectionjan2014.pdf>

concerned to assert Russia as an ‘independent’ Eurasian center of power within the ‘polycentric system of international relations.’⁵⁴

Whether or not this shift in policy will be successful, the Kremlin is moving forward. But as this next section suggests, east isn’t the only direction Russia should be looking, for the Southern Hemisphere has viable and prosperous economic opportunities.

VI. Looking Ahead to New Trade: Russia's Suggested Agricultural Import Partners

The Russian Federation must now locate partners in order to keep its diversity within the food market. International trade has exponentially increased over the past 30 years, creating a marketplace in which more goods are more readily available than ever. The World Trade organization describes the changes in the past 30 year as such,

International trade flows have increased dramatically over the last three decades. According to WTO trade statistics, the value of world merchandise exports rose from US\$ 2.03 trillion in 1980 to US\$ 18.26 trillion in 2011, which is equivalent to 7.3 per cent growth per year on average in current dollar terms. Commercial services trade recorded even faster growth over the same period, advancing from US\$ 367 billion in 1980 to US\$ 4.17 trillion in 2011, or 8.2 per cent per year. When considered in volume terms (i.e. accounting for changes in prices and exchange rates), world merchandise trade recorded a more than four-fold increase between 1980 and 2011.⁵⁵

There is no better time for Russia to become increasingly involved in a market system that is more open than ever.

Central and South American would both be viable regions for Russia to do trade with in the future and in some cases continue to trade with as well as increase relationships in terms of

⁵⁴ Lo, Bobo, “Russia’s Eastern Direction-Distinguishing the Real from the Virtual”, *Russia/NIS Center*, January 2014, <http://www.ifri.org/sites/default/files/atoms/files/ifrirnr17boboloeasterndirectionjan2014.pdf>

⁵⁵ “Trends in International Trade”, *World Trade Report 2013*, April 10, 2013, https://www.wto.org/english/res_e/booksp_e/wtr13-2b_e.pdf

revenue. The possibilities for new partners are great, and indeed in the past year significant steps have been taken in a positive direction.

For basic food commodities, replacements are relatively easy. a number of countries have indicated a willingness to increase food exports to Russia in order to compensate for banned products from the US and EU. Specifically, Argentina and Brazil have indicated a willingness to supply beef, and the day after Putin's decree Rossel'khoznadzor approved the export of beef from 90 meat processing plants in Brazil. Chile is ready to sell more salmon to Russia, replacing the losses from Norway. Ecuador is ready to sell more shellfish to Russia. Belarus said it is willing to increase the export of cheese, milk, and other dairy products; and has said it can replace Polish apples and Dutch potatoes. Central Asian nations are ready to provide fruits and vegetables. Turkey, which in 2013 sold \$1.7 billion worth of food to Russia, predicts that the value of food exports may double.⁵⁶

First and foremost South America is larger in both population and wealth than Central America. The most powerful and economically important country in the South American region is Brazil. The Brazilian economy has been of great interest to the world at large and is often discussed in leading publications such as *The Economist* and the *New York Times*. From 2009-2013 both the GDP per capita and the population have steadily grown.⁵⁷ Although recent political turmoil arising from corruption has made the current government less stable Brazil still maintains the ability to remain a large agricultural exporter.

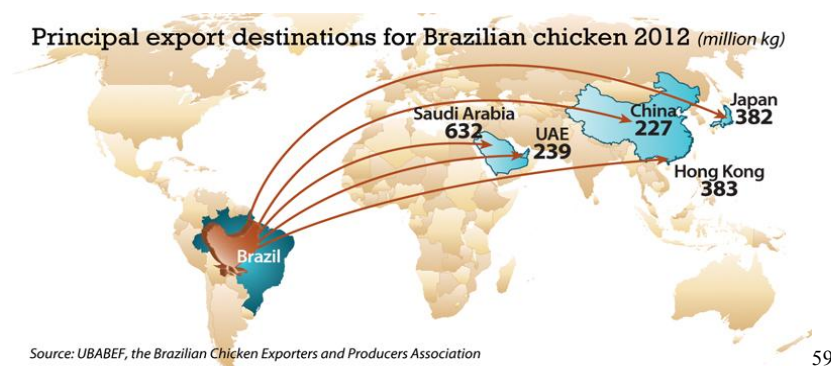
Although Brazil does not produce the vast variety of fruits that Central America does, it does offer a variety of products universal in their necessity. In Brazil, chicken is king with the country exporting over \$7 billion dollars in meat products.⁵⁸ The country exports to many

⁵⁶ Wegren, Stephen K, "Russia's Food Embargo", *Russian Analytical Digest No. 157*, December 17, 2014, <http://www.css.ethz.ch/publications/pdfs/RAD-157.pdf>

⁵⁷ "Brazil Economic Outlook", *FOCUS ECONOMICS*, March 17, 2015, <http://www.focus-economics.com/countries/brazil>

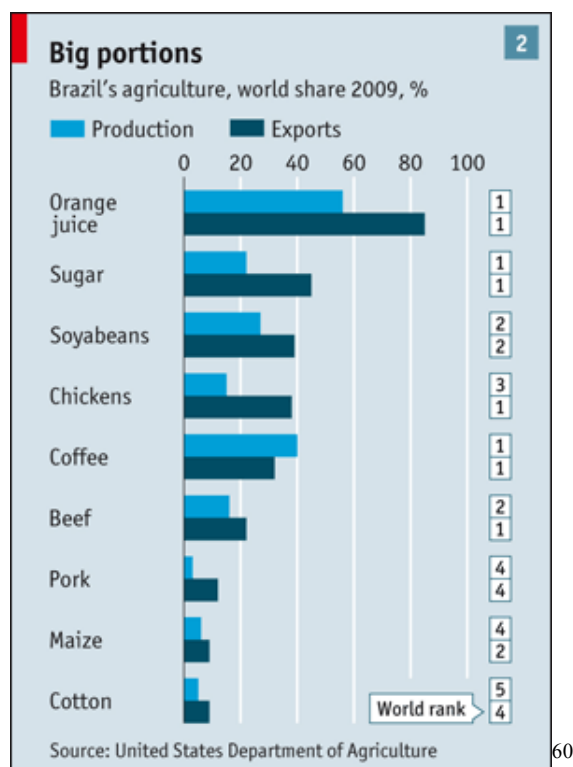
⁵⁸ "Learn More About Trade in Brazil", *Observatory of Economic Complexity*, March 1, 2015, <https://atlas.media.mit.edu/en/profile/country/bra/>

markets around the world, and it is logical that Russia become one of them, it is more than likely considering that the meat from Brazil already travels as far as Japan in recent years.



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The draw to Brazil as a trading partner for Russia is variety from a single source. In 2009 the country had 9 agricultural goods that individually accounted for large percentages of the world's share.



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⁵⁹ Fig. 10. Source: UBABEF, the Brazilian Chicken Exporters and Producers Association. 2012, Digital Image, Available from: WATTagNet, http://www.wattagnet.com/The_Brazilian_Port_of_Itajai_Chicken_export_capital_of_the_world.html (accessed March 1, 2015)

Sugar, soy, chickens, and coffee exports are some of the largest in the world. The nation has built itself upon a standard of speedy expedition that cannot easily be undone. In addition to its variety in products Brazil is also politically attractive for its membership as one of five BRICS countries, Russia, Brazil, China, India, and South Africa. These countries have been distinguished because of their “demographic and economic potential to rank among the world’s largest and most influential economies in the 21st century”⁶¹ They now hold annual meetings and are part of the Russian and Chinese push toward a “multipolar” world order. With both countries looking for greater shares of world markets and influence as opposed to the American and EU presence, it is likely that there is sufficient motivation for a successful partnership between Russia and Brazil.

Colombia exports more than two billion dollars in coffee each year and just over a billion in bananas.⁶² Although both smaller in geography and agricultural exports, Colombia should not be overlooked by the Russian Federation. The country in 2014 has been blessed with an investment boom, and the country’s economy has had 6.4% of positive economic growth in the first quarter of 2014.⁶³

The other giant in the South American theatre is Argentina. The idea that the new government in Argentina is trying to align itself with China⁶⁴ is favorable to Russia as well. Much like the economies of other South American nations in the past five years the economy has been one of continued fluctuation. In terms of exports the numbers speak for themselves. Argentina has exported more than \$10 billion dollars worth of soybean meal, \$4 billion in corn,

⁶⁰ Fig. 11. Piaui, Cremaq. Source: United States Department of Agriculture. 2009, Digital Image. Available from: The Economist, <http://www.economist.com/node/16886442> (accessed March 20, 2015)

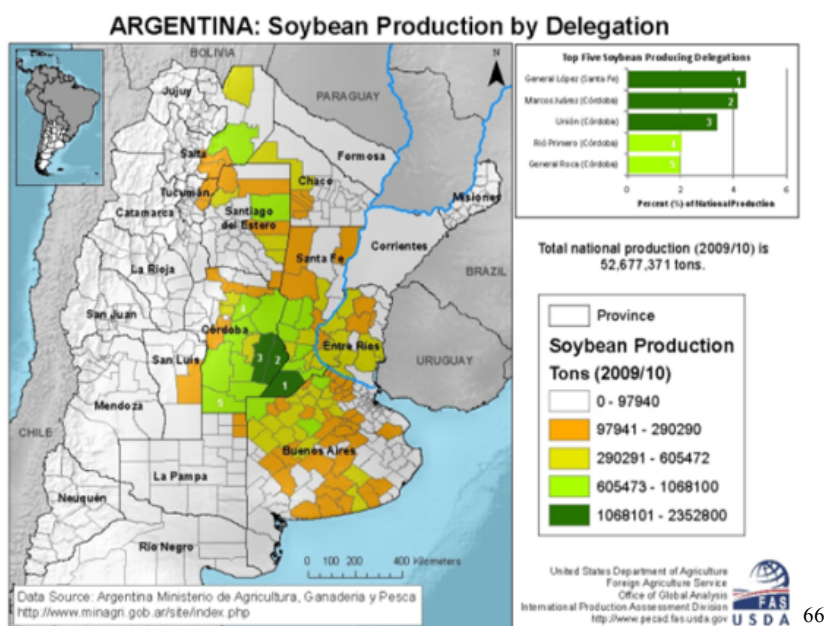
⁶¹ “BRIC Countries-Background, Latest News, Statistics, and Original Articles”, *Global Sherpa*, March 10, 2015, <http://www.globalsherpa.org/bric-countries-brics>

⁶² “Learn More About Trade in Columbia”, *Observatory of Economic Complexity*, March 8, 2015, <https://atlas.media.mit.edu/en/profile/country/col/>

⁶³ “Passing the Baton”, *The Economist*, July 31st, 2014, <http://www.economist.com/news/finance-and-economics/21610305-colombia-overtakes-peru-become-regions-fastest-growing-big-economy-passing>

⁶⁴ “Argentina”, *The Economist: Intelligence Unit*, March 2, 2015, <http://country.eiu.com/argentina>

and \$4 billion of soybeans.⁶⁵ Although not the tropical variety one finds in Central America the agricultural products that Argentina specializes in are a necessary building blocks to many other organic and processed foods. The soybean in the last twenty years has become a mega-crop, much like corn in the United States. The photo below illustrates the soy production per delegation (a land division similar to a county).



Agriculturally, soybean production is of vital importance in the consumer industry. Earlier it was discussed that Russia, in order to satisfy its increasingly demanding consumers must provide both quantity and variety. The products that are made with soy are gradually taking over the consumer market. Soymilk, tofu and other meat substitutes are gaining in popularity. Soybean oil is used to make and is a component of a variety of products such as salad dressings, mayonnaise,

⁶⁵ “Learn More About Trade in Argentina”, *Observatory of Economic Complexity*, April 2, 2015, <https://atlas.media.mit.edu/en/profile/country/arg/>

⁶⁶ Fig. 12. Source: United States Department of Agriculture, Foreign Agriculture Service, Office of Global Analysis, International Production Assessment Division, Argentina Ministerio de Agricultura, Ganadería y Pesca. 2010, Digital Image. Available from: Martell Crop Projections, <http://www.martellcropprojections.com/SampleCropReports/Argentina-Soybean-Production-by-Delegation> (accessed March 27, 2015)

tuna, sardines, crackers, baked breads, cookies, and pies.⁶⁷ All these foods and more are necessary to have in order for variety to be maintained within the Russian Federation. In other words, soy has become much an important crop in the past years, it is necessary to find a steady supplier.

A long and narrow nation, Chile produces a whole host of pitted and fresh fruits, and fish. Nearly \$1 billion dollars worth of pears and apples leave the nation, accompanied with approximately \$700 million dollars worth in pitted fruits, and nearly \$2 billion in fish fillets.⁶⁸ The nation is best known for its copper exports, from the northern Atacama Desert, but because of the length of the nation and its temperate climate along the Pacific Ocean, there is a large portion of the country viable for fruit growth. Chile may be the largest exporter of fresh fruits in the Southern Hemisphere.⁶⁹ The type of variety and volume is exactly what Russia needs, given that the harsh climate of the Federation hardly bears fruit for many of the seasons.

Central America can be viewed in many ways. The region consists of seven countries, each with their own unique footprint of imports and exports. Like any region these seven countries have their drawbacks. Much like the challenges for India and China, the rural populations of those in Central America also face poverty. However the region is plentiful in terms of variety.

India and China have two of the largest populations in the world, making mouths to feed, making more of an agricultural crisis than problem. One would think that larger populations would mean a larger workforce, and numerically that logic makes sense. But when it comes to agricultural exports, the less food needed domestically means more available to export to other

⁶⁷ “Uses of Soybeans”, *North Carolina Soybean Producers Association Inc*, 2014, <http://ncsoy.org/media-resources/uses-of-soybeans/>

⁶⁸ “Learn More About Trade in Chile”, *Observatory of Economic Complexity*, March 14, 2015, <https://atlas.media.mit.edu/en/profile/country/chl/>

⁶⁹ “Chile and its fruit industry”, *Fruits from Chile*, March 6, 2015, <http://www.fruitsfromchile.com/industry.php>

nations. Couple this with the advantage that Central America has a long growing season and it is a beneficial combination. The needs of Russia are those agricultural products like fresh fruits and vegetables. What Russia is also looking for are products that are cheap, no country has an interest in paying top dollar for goods that could be obtained elsewhere. Central America has a workforce that is willing to work for wages far below those in Europe or the United States, which may be a factor in the region's ability to maintain a competitive price. Honduras exports millions of dollars worth of clothing products each year with working conditions that are far below a Western standard but fortunately for Russia have the result of less expensive prices.

Much like Europe, Central America has a series of small nations, each with the capacity to export goods. Honduras is an excellent start. This past year Honduras exported more than \$1 billion dollars in coffee, approximately \$250 million in bananas, and \$124 million in melon.⁷⁰



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⁷⁰ “Learn More About Trade in Honduras”, *Observatory of Economic Complexity*, March 4, 2015, <https://atlas.media.mit.edu/en/profile/country/hnd/>

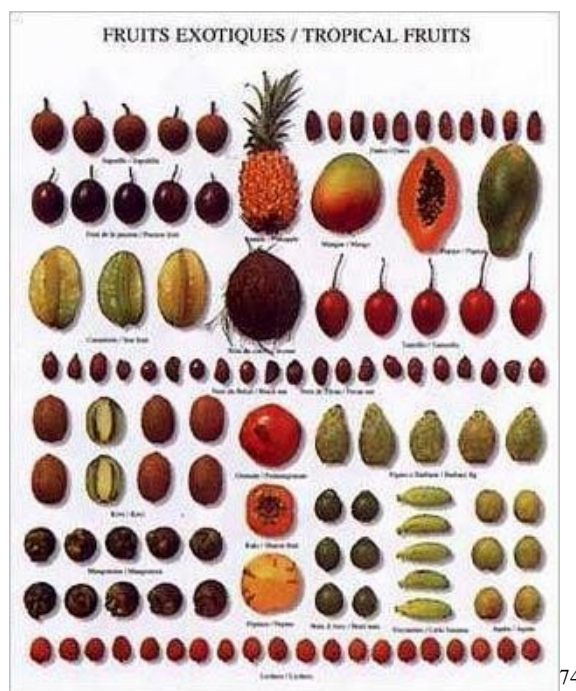
⁷¹ Fig. 12. Source: BCH, FXP, 2012, Digital Image. Available from: Fresh Plaza, <http://www.freshplaza.com/article/112790/Honduras-Melon-producers-look-to-boost-exports> (accessed March 30, 2015)

Other nations both to the north and south have tremendous amounts of agricultural product to serve up as well. In addition Guatemala exports millions of dollars in bananas and melons annually. Nicaragua provides a slightly different although equally valuable agricultural export portfolio. One of the imports Russia also requires is meat, particularly bovine. For decades the United States has been a large player in the production of the meat, but Russia need only to look south of the border to find a suitable alternative. Last year Nicaragua exported \$366 million in frozen bovine meat, and \$81 million of the meat refrigerated. Couple that with \$125 million in groundnuts and a \$96 million in cheese⁷² and a Russian consumer is looking at both variety and affordability.

Costa Rica, a slightly smaller nation has an abundance of fruit to offer. This small nation exports of a billion dollars in bananas and tropical fruits.⁷³ Although tropical fruits are represented as one category in terms of exports, there are many different varieties available, as illustrated below.

⁷² “Learn More About Trade in Nicaragua”, *Observatory of Economic Complexity*, March 13, 2015, <https://atlas.media.mit.edu/en/profile/country/nic/>

⁷³ “Learn More About Trade in Costa Rica”, *Observatory of Economic Complexity*, March 13, 2015, <https://atlas.media.mit.edu/en/profile/country/cr/>



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Southern Costa Rica exports food products that are directly related to the sea. The small nations sends more than \$67 million in frozen fish and about \$57 million in crustaceans. Again the variety of agricultural products is available in Central America. Russia was naturally attracted to Europe because the collection of nations represented variety and proximity. With regards to Central America, Russia has the opportunity to have that variety accessible within a small geographic space. The proximity is indeed lost, but the selling price for these products can indeed be an incentive in itself. The labor is cheaper. A coffee picker in Nicaragua can make only 2-3 dollars a day, even though the minimum wage in the nation should be around \$6.⁷⁵ This is not to say that the working conditions are up to standard or that those who toil in the field are being treated fairly, but setting all other factors aside, numerically the trading relationship is

⁷⁴ Fig. 13. Source: Food Vacation. Digital Image. Available from: Costa Rica Dining, Food & Cookery: A Cultural & Travel Guide, <http://www.foodvacation.com/id8.html> (accessed March 24, 2015)

⁷⁵ Zamora, Miguel, "Farmworkers Left Behind: The Human Cost of Coffee Production", *Coffee Daily News by Roast Magazine*, July 17, 2013, <http://dailycoffeenews.com/2013/07/17/farmworkers-left-behind-the-human-cost-of-coffee-production/>

inherently in Russia's favor and the countries in South America are far less likely to have trade influenced by political considerations.

While Central and South America are trade opportunities for the Russian government there are also options with India and China and Turkey. India and Russia have shared a history both pre and post Soviet era. The two nations have long had a prosperous economic, military, social and diplomatic relationship. Indian Prime Minister Narendra Modi can be seen on a state visit to Russia in 2014. After talks between the nations the Russian Foreign Ministry issued the statement below:

The parties stressed the special nature of the Russian-Indian privileged strategic partnership, confirmed their intention to maintain regular bilateral contacts and coordinate approaches and positions in international organizations and multilateral forums to promote peace, security and stability, effectively countering new challenges and threats, a multipolar world order.⁷⁶

Because Russia already has a stable relationship with India it will be much easier to diversify trade between the two nations. Maintaining this bilateral contact for Russia is now more important than ever, and it serves Russia goals to be a trading partner, hopefully negatively impacting India's trade with the West. The two nations have shared cooperation in sectors such as energy, military and space, and leadership continues to meet with each other frequently in order to discuss further possibilities for strengthening their relationship. A stronger agricultural alliance between India and Russia is the perfect opportunity to reduce Russia's dependence on

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"Ranjan Mathai holds consultations in Moscow", *Embassy of the Russian Federation in the Republic of India*, March 25, 2013, http://rusembindia.com/index.php?option=com_content&view=article&id=5839%3Aranjan-mathai-holds-consultations-in-moscow&catid=16%3Apress-on-bilateral-relations&lang=en

the West, one of Putin's long time goals, and for Russia to continue to align itself with one of the rising world powers.

In order to make trade attractive, Russia must provide a series of incentives in order to convince Indian leadership that Russian fertilizer is a benefit to both countries in that the typical small farm will have the ability to increase production and in turn increase the number of exports to Russia. One of the most expensive inputs for farming is fertilizer. Fertilizer is one of the largest imports for India because the production and manufacturing processes require petroleum products; something that India does not have in abundance. Russia is the largest exporter in the world of mixed mineral and chemical fertilizers, with over \$4 billion dollars exported this year. India needs fertilizer spending almost \$3 billion on Nitrogenous Fertilizers this year.⁷⁷ With Western sanctions being imposed on food products, fertilizer trade between the West and Russia has decreased leaving products to trade that India needs in order to increase production and export food. Another incentive is oil, as discussed previously; Russia's main leverage is through some of the highest exports of petroleum products and oil in the world. In 2010 India imported roughly 3.2 million barrels of crude oil per day.⁷⁸ This need has continuously increased over the last five years. India is also currently trading arms with Russia, a current partnership that can only be strengthened by possible increased agricultural trade.

India is largely thought of as one of the world's fastest growing economies. For Russia there are very few downsides to continue to partner with this emerging power. Just as the Soviet Union was once thought of as a world power, India is on a trajectory that appears to be leading to great economic success. With the rapidly rising technology and pharmaceutical sectors India has positioned itself to begin to produce and manufacture some of the worlds foremost technologies.

⁷⁷ "Learn More About Trade in India", *Observatory of Economic Complexity*, March 10, 2015, <https://atlas.media.mit.edu/en/profile/country/ind/>

⁷⁸ <http://www.indexmundi.com/energy.aspx?country=in&product=oil&graph=imports>

Take this with a strong military force, India has over 3 million active and reserve personnel,⁷⁹ and one begins to picture a nation that is almost certain to be one of the key participants in world affairs in the twenty-first century.

Although India has military and economic ties to the West it will not particularly hinder trade with Russia at this time. In order to continue to grow India requires a cheap and plentiful supply of products like oil and fertilizer, products that Russia exports in abundance. Although much of Europe and the United States are able to produce these products the geographic location of Russia makes it more economically viable for trade. Also, historical closeness makes a Russian-Indian agricultural partnership all the more likely. With India's rapidly growing economy it is economic perfection for Russia to partner with India at this time. Regarding the characteristics for ideal trading partners discussed above, India, although growing, is still a partially impoverished nation with millions living in urban and rural poverty. This creates the type of agricultural dependence Russia needs. India has growing pains and Russia is well suited to meet the demands and look forward to a continuing a partnership with an increasingly successful nation.

There can be no greater Eastern relationship more profitable than that of Russia and China. Profitable is defined in a multi-faceted sense. In the twenty first century, the two nations have enjoyed a profitable economic, diplomatic and military relationship. China is the largest producer of goods in the world, and like India it is one of the world's fastest growing economies, although Chinese growth is now slowing as the country reaches middle-income status. The reason for the potential trading partner is both economic - Russian oil and gas exports to China - and ideological. China is similar to India in the fact that China's agriculture is struggling to keep

⁷⁹ "India Military Strength", *GFP*, March 1, 2015, http://www.globalfirepower.com/country-military-strength-detail.asp?country_id=india

up with increased demand. Whether China continues to foster its roots in rural or move toward larger agribusiness is undecided:

Farming in China is at a crossroad. Indeed, statistically speaking, the rural population is declining, the average age of farmers is rising, and fewer young people are choosing farming as a vocation. Furthermore, it is projected that the number of farmers in China will continue to decline. As a result, if there are no effective policies put into place to attract the younger generation into farming, China's ability to produce enough food for its people and sustain agriculture development as a whole, along with the overall development of China, will be severely threatened.⁸⁰

Regardless of the path China chooses to take or is forced into, affordable fertilizer in greater quantity and of better quality will be a necessary input for Chinese farmers in order to be successful. Russia should capitalize on the already strong relationship by offering to provide China with fertilizer under the market price.

Putin must transition his agricultural economy and technology to meet Eastern needs. There are several ways that this can be done. Although the price of oil has dropped below \$50 dollars a barrel this year, Russia is still in good standing with the amount that it has. Oil, no matter at what price, will always be needed, especially for the rapidly growing east. Secondly, in direct relation to agriculture the Federation needs to put more money and technology developments into the production of fertilizer. Currently there are five to six companies that produce various products ranging from mineral to chemical fertilizers. Due to Russia's inability to domestically produce the agricultural products that it needs, developing fertilizer is an economically viable choice. The countries in the world with the largest and most successful agricultural sectors are in constant need of fertilizer. If the price of oil still continues to fall

⁸⁰ Yang ,Zhengzhou, "Demographic Changes in China's Farmers: The Future of Farming in China" *Asian Social Science*, 9, no. 7 (2013): 136 accessed 4-04-2015.
<http://ccsenet.org/journal/index.php/ass/article/viewFile/27938/16858>

Russia has the ability to remain a top exporter of fertilizer, making it an invaluable partner to those countries that export agricultural goods for most of their revenue. Russia is a petro state, and it balances on the volatile price of oil. Many state that Russia does not have a modern economy at all, Kathleen Troia McFarland, former Deputy Assistant Secretary of Defense for Public Affairs comments:

Russia does not have a modern economy: it's a petro-power. The only thing it sells that the world wants to buy is oil and natural gas. When was the last time anyone bought a Russian computer? A Russian car? A Russian cell phone? Russia is so dependent on high-energy prices that if oil falls below \$100 a barrel, the Kremlin can't meet payroll.⁸¹

It is true that Russia is a petro state and the new agricultural situation may force the nation into producing more agricultural petroleum goods. Although the nation already does this, with the potential new trading partners it could cause the demand for such products to increase, and thus increase the revenue for the Russian Federation. The proposition is not to diversify Russia too far away from what it has successfully exported for decades, but merely diversify enough to be profitable in the agricultural sector. If the last year and a half has shown anything to Russian leadership, it is that the days of their Western supplying petro-state may be coming to an end. Although Eastern Europe is dependent on Russia, it is not a very agriculturally profitable region. If the Russian petro-state is to survive it must do so by developing its fertilizer industry. Agriculturally, this will be beneficial for both trade and domestic production. This sophisticated and amplified production could be achieved through many means. The government could offer lower interest rates for companies wishing to produce; more of the federal budget could also be spent on developing new technologies that would help to advance the sector. In an age where

⁸¹“Kathleen Troia McFarland Quotes”, *Brainy Quotes*, March 3, 2015, <http://www.brainyquote.com/quotes/quotes/k/kathleentr644512.html>

food production will be king for a rising global population fertilizer may be the new agricultural liquid gold.

Since the recent ban, Russia has already started to form new agricultural alliances with Turkey. In August of 2014 Turkish Economy Minister Nihat Zeybekci stated, “Turkey is a major supplier of food and agricultural produce to Russia. It is ready to increase its food exports to Russia if necessary,” Indeed the partnership between the two nations has been building. In 2013 Turkey exported \$1.8 billion dollars in agricultural products, a large majority of those exports were fruit and vegetables.⁸² With Turkey as a supplier Russia has a local and willing supplier of a variety of items and hopefully a lower price. Turkey is astutely willing to help fill the void for Russia but also generally aligning itself with a nation that has considerable power in the East. A profitable partnership considering that the country exports more than \$6 billion in vegetable products and almost \$2 billion in animal products in 2012 alone.⁸³

With the variety that exists in the world, the international market is abundant with options. Below is a table summarizing where Russia can receive its agricultural products from as suggested in this thesis.

⁸² “Turkey: ‘We’re ready to increase food exports to Russia’”, *RT*, August 16, 2014, <http://rt.com/business/180776-turkey-agricultural-exports-russia/>

⁸³ “Products Exported by Turkey (2012)”, *Observatory of Economic Complexity*, April 15, 2015, https://atlas.media.mit.edu/en/explore/tree_map/hs/export/tur/all/show/2012/

Agricultural Product	Country to Import From
Chicken	Brazil
Beef	Brazil
Pork	Brazil
Seafood	Brazil, Chile, Ecuador
Coffee	Colombia, Nicaragua, Honduras
Soy/Soybeans	Argentina
Rice	India
Fruits	Chile, Guatemala
Cheese/Dairy	Nicaragua, Belarus

The table covers only a small percentage of options that are available to the Russian Federation. The purpose is to illustrate that the Russian government indeed has many international player it could potentially trade with in the hope of once again diversifying its agricultural marketplace.

VII. Conclusion

Although massive food shortages are extremely unlikely, due to the recent food bans Russia is suffering from a critical lack of diversity in its food selection. In the short term it cannot substantially increase domestic production to meet the demand. The needs can be met by trade and various alternatives do exist but also with a number of issues that need to be addressed. Although many of these countries have the necessary products that Russia requires, that does not mean successful partnerships will be forged. As mentioned previously, Russia has been continuing to alienate itself from certain parts of the world. The hardest gap for Russia to bridge will be trying to trade with those countries that depend on either Western funding or trade. Russia must also convince the rest of the world that its break with the West is semi-permanent,

and as such the cost and risk of shifting resources to trade with Russia is a worthwhile endeavor. The Kremlin's foreign policy has been so solely centered on advancing Russia's interests that others in the international community wonder if the country is capable of long-lasting alliances.

This thesis is not meant to forecast what Russian agricultural trade will look like in twenty years. The thesis focus is to describe the current agricultural status that Russia is in, and who could be possible trading partners for the near term, as the ban and sanctions continue. This thesis is dependent on two assumptions, that the sanctions will continue, and that relations with the West will continue to sour.

With the Ukrainian crisis mounting there is little that can be done now to change the predominantly negative opinion that the West holds for Russia and particularly Putin. The agricultural agenda that is discussed in this paper assumes that this will not change. Russia will need to find its place in a new world order. In the year 2014 the catalyst for doing this has indeed been food. These changes will continue to be played out in the agricultural sector and Russia must redefine itself through those same means. Due to the reality the country faces in its relationship with the United States, the European Union, Canada, Australia, and Norway the Federation has no choice but to shift its economic and trading perspectives eastward and to the Southern Hemisphere. In this day and age we will not see starvation or malnutrition in Russia as a result of the sanctions and bans, however the negative impacts are not to be forgotten. "Food trade wars seldom generate many winners."⁸⁴

⁸⁴ Wegren, Stephen K, "Russia's Food Embargo", *Russian Analytical Digest No. 157*, December 17, 2014, <http://www.css.ethz.ch/publications/pdfs/RAD-157.pdf>

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FAOSTAT. 2009, Digital Image. Available from: FAO Agriculture and Trade Background Note:
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Fig. 13. Source: Food Vacation. Digital Image. Available from: Costa Rica Dining, Food & Cookery: A Cultural & Travel Guide, <http://www.foodvacation.com/id8.html> (accessed March 24, 2015)

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Michele has a love of traveling, going with the UMaine Business School to Russia as well as volunteering in an orphanage in Haiti. In her senior year Michele was awarded the Kathryn W. Davis Projects for Peace Grant, a ten thousand dollar grant that will be used in the construction of a water tower in the mountain community of Grand-Goâve, Haiti. In May of 2015 Michele will also participate in the Margaret Chase Smith Policy Center's Maine NEW Leadership Program.